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HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

Jet Propulsion Laboratory Edwards Facility, Weigh & Control Building (Building 4234/E-35)
Edwards Air Force Base
Boron Vicinity
Kern County
California

HAER No. CA-163-N

Photographers' Credits:

Credit BG: Brian Grogan, Photography & Preservation Associates, Inc., September 1995
Credit WCT: Photographic copy of JPL photograph by William C. Tibbitts, date cited in caption

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CA-163-N-1 Credit BG. The southwest and southeast sides of Weigh & Control appear as the camera looks due north (0°). Barricades on the northwest and northeast sides protect this structure from effects of any explosions at the Mixer Building (4233/E-34), Oxidizer Grinder Building (4235/E-36) or other nearby propellant processing structures. The proliferation of doors is because many of the rooms have no interior interconnection--a safeguard to contain and prevent the internal spread of fires or explosions. Signs are posted on the doors describing maximum allowable propellant weights and number of personnel in rooms. A safety shower is featured on the southern exterior corner of the building. Apparatus on the roof consists of air conditioning ducts and fume vents.

CA-163-N-2 Credit BG. The northwest and southwest sides of the building appear as seen when looking northeast (38°). (Photo taken from location near Building 4275/E-76, Standby Generator.) Note the extent of the barricades. On the corner of the roof at the extreme right of this view appears a small funnel; according to JPL personnel, this device collected rainwater and conducted it through a pipe which appears at the corner of the building below. The water was used to flush any wastes from the nearby drainage trenches in the exterior concrete pads.

CA-163-N-3 Credit BG. The interior of the control room appears in this view, looking north (0°). The control console in the room center permitted remote control of various propellant grinders and mixers in surrounding buildings. Television monitors (absent from their mounts in this view) permitted direct viewing of operating machinery. From foreground to background:

Panel (1) contains OGAR warning light switches for Curing Buildings E-39, E-40, E-41 and E-86; (O=off, G=green [safe], A=amber [caution], R=red [danger])
Panel (2) E-85 Oxidizer Dryer Building console: OGAR switch
Panel (3) E-84 Oxidizer Grinder Building console: controls for vibrator, feed, and hammer;
Panel (4) E-36 Oxidizer Grinder Building console: controls for vibrator, feed, hammer, attritor, and SWECO ("SWECO" undefined)
Panels (5) & (6) blank
Panel (7) E-38 Mixer & Casting Building console: vacuum pump, blender, heating and cooling controls
Panel (8) E-37 Mixer & Casting Building console: motor controls for 1 pint, 1 gallon, 5 gallon and 30 gallon mixers; vacuum pump, deluge (fire suppression), pot up/down, vibrator, feed, and SWECO.

CA-163-N-4 Credit WCT. Original 2-¼" x 2-¼" color negative is housed in the JPL Photography Laboratory, Pasadena, California. This view shows the control room in use, with JPL employees Ron Wright, Harold Anderson, and John Morrow presiding. (JPL negative no. JPL-10288A, 27 January 1989.)

CA-163-N-5 Credit BG. This interior view shows the weigh room, looking west (240°). Electric lighting and scale read-outs (boxes with circular windows on the wall) are fitted with explosion-proof enclosures; these enclosures prevent malfunctioning electrical parts from sparking and starting fires or explosions. One marble table and scale have been removed at the extreme left of the view. Two remaining scales handle small and large quantities of propellants and additives. Marble tables do not absorb chemicals or conduct electricity; their mass also prevents vibration from upsetting the scales. The floor has an electrically conductive coating to dissipate static electric charges, thus preventing sparks which might ignite propellants.

CA-163-N-6 Credit WCT. Original 2-¼" x 2-¼" color negative is housed in the JPL Photography Laboratory, Pasadena, California. JPL staff members Harold Anderson and John Morrow weigh out small amounts of an undetermined substance according to a solid propellant formula (JPL negative no. JPL-10277AC, 27 January 1989).

CA-163-N-7 This photographic copy of an engineering drawing displays the building's floor plan in its 1995 arrangement, with rooms designated. California Institute of Technology, Jet Propulsion Laboratory, Facilities Engineering and Construction Office, **"Addition to Weigh & Control Bldg. E-35, Demolition, Floor and Roof Plans,"** drawing no. E-35/3-0, October 5, 1983. California Institute of Technology, Jet Propulsion Laboratory, Plant Engineering: engineering drawings of structures at JPL Edwards Facility. Drawings on file at JPL Plant Engineering, Pasadena, California.